



RISK ASSESSMENT – TASK BASED

IGEM 2016

Location: Room W301, Medical building	Building Number: 181	Date: February 2016	Assessed By: Amber Willems Jones	Health & Safety Representative: Vincé Kalangi
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Description of Activity: 4.10 Agar Plating SWP No: 4.10	
Is there past experience with the Activity that may assist in the risk assessment? Incidents & Near-hits, Incident Investigations, Workplace Inspections, Training, Standards, Legislation & Codes, Uni Guidance Material, Existing Controls, Industry Standards.	NO

1. TASK	2. HAZARD	3. Estimated RAW RISK SCORE C x E x L	4. CONTROLS	5. Residual Risk Score RISK SCORE C E L C x E x L				6. Residual Risk
Autoclaving/Microwaving LB	Burns due to accidental contact with hot bottle	5x6x1	Wear appropriate PPE, Ensure that all training has been undertaken	5	6	0.1	3	LOW
Weighing out tryptone	Inhalation of fine particulates	1x6x0.5	Wear appropriate PPE Use only in well ventilated areas	1	6	0.1	0.6	LOW
Weighing out Yeast extract	Inhalation of fine particulates	1x6x0.5	Wear appropriate PPE. Use only in well ventilated areas	1	6	0.1	0.6	LOW
Working near open flame	Burns due to accidental contact with flame	5x6x1	Wear appropriate PPE, Ensure that all training has been undertaken	5	6	0.1	3	LOW
Working with antibiotics	May cause an allergic skin reaction	15x6x1	Wear appropriate PPE.	15	6	0.1	9	
	TOTAL	156		TOTAL				16.2
Name & Signature of Laboratory Head/Supervisor or Delegate		Amber Willems Jones				Date		

Number and Title	PRG# 4.10 Agar Plating
Name of Laboratory/Department	The University of Melbourne IGEM Team Laboratory, Department of Biochemistry
Author, Date Prepared & Date of Review	Author: Ella Bocquet-Gaylard Updated : February 2016, Date: 1/2/2016 Review by: February 2018
Introduction	This experimental protocol describes the procedure to make LB-Agar plates for bacterial culture
Principles / Scope	LB-Agar is necessary for bacterial culture and must be made according to the protocol below. This will ensure sterility and will prevent contamination by unwanted microorganisms.
Risk Management	<i>Risk assessments have been prepared and are available in the Risk Register (or attached to the SWP). Raw Risk: LOW Residual Risk: LOW</i>
Safety Management	Hazards: Always wear appropriate personal protective equipment. When handling hot material always wear thermal-protective gloves. Risk Controls: Administrative
Licences / Permits	N/A
Training / Competency	All team members must be inducted into the use of any equipment used.
Equipment	Microwave, Bunsen Burner
Protocol	<p>Materials 250 mL LB Broth 2.5 g Bacto tryptone 1.25 g Bacto yeast 3.75g Agar</p> <p>Note: Ensure sterile technique is used to prevent contamination.</p> <p>Step 1 Make 250mL of LB broth. Step 2 Pour into a 500mL Schott bottle Step 3 Add agar to the LB broth to a final concentration of 1.5% Step 4 Autoclave for 15 mins at 121 °C. Step 5 LB agar can be allowed to set in jar or used immediately following a cooling off period (media should be 50 °C before antibiotic is added) If agar allowed to set in Schott bottle, slightly unscrew lid and microwave until agar is molten. Use following a cooling off period, (media should be <50 °C before antibiotic is added) Step 6 Working on a presterilised bench, near a blue open flame. Pour agar so as to cover the Petri dish completely (approximately 20m per plate) Step 7 Stack the plates on top of one another to prevent condensation. Step 8 Once set, store the plates at 4 °C. Plates can usually be stored for two weeks in the fridge before they are no longer suitable for use.</p>
Controls / Calibration	N/A
Waste Disposal	<i>Disposal requirements:</i> Follow PC I guidelines for handling, cleaning and when necessary, disposal of

	bacterial culture and solid wastes.
Emergency Procedures	<p>First aid measures</p> <p>Eye contact: Immediately flush eyes with plenty of water for at least 20 minutes and get medical attention.</p> <p>Skin contact: In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Remove contaminated clothing and wash before re-use</p> <p>Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.</p> <p>Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call medical doctor or poison control centre immediately 13 11 26.</p>
References	
Authorised By	Amber Willems Jones